

REMARKS

Before a first substantive Office action on the merits of this case, the above amendments to the claims are presented, and reconsideration of this case is respectfully requested.

On September 27, 2002 the examiner contacted the undersigned requesting that an election be made between two separate groups of claims including claims 1-20 in a first group and claims 21-28 in a second group. Group I including claims 1-20 was elected by the undersigned in response to this request.

The examiner additionally sent by facsimile a newly published reference (United States Patent Application Publication No. US 2002/0104524 A1) to Reible, which the examiner had preliminarily identified as being relevant to the patentability of the claims of this application.

The above-identified amendments are provided to place the claims in best form to identify patentable subject matter, particularly in view of the teachings of Reible, such that prosecution of this case can advance as efficiently as possible. Specifically, dependent claims 4-9, 11, 15 and 20 which include limitations not taught by Reible have been placed in independent form (or arranged to depend from claims placed in independent form) and to include all of the limitations of their base claim and any intervening claims. Accordingly, these claims should now be in a form warranting allowable status.

Claims 1 and 14 have been amended to include additional limitations not taught by Reible. Specifically, claim 1 has been amended to specifically require that the rear end of the firing chamber be at least partially open when the back plug is removed. Reible does not teach such a rear end of a firing chamber being open when a back plug is removed. Claim 14 has been amended to require that the door adjacent the loading hole through which the paint ball passes when entering the firing chamber move laterally relative to a center line of the firing chamber, rather than in an "in-line" manner.

relative to a center line of the firing chamber, as taught by Reible. Applicant respectfully submits that the claims as amended are in proper form for allowance.

Accordingly, the undersigned respectfully submits that the new claims presented herein define patentable subject matter and warrant favorable consideration by the examiner. Accordingly, reconsideration of this case is respectfully requested. Should the examiner have any questions which would benefit from a discussion with the undersigned, the examiner is invited to contact the undersigned by telephone.

Respectfully Submitted:



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claims 21-28 have been canceled.

Claims 1, 4, 11, 14, 15 and 20 have been amended as follows:

Claim 1 (amended) - A paint ball loading and firing apparatus comprising in combination:

a source of compressed gas;

an elongate firing chamber having a barrel at a first end for release of a fired paint ball and a removable back plug at a second rear end opposite said first end, said second rear end adapted to be at least partially open to an exterior of the apparatus when said back plug is removed;

a paint ball loading hole in said firing chamber, said loading hole located between said back plug and said barrel; and

a selectively openable gas path between said source of compressed gas and said firing chamber.

Claim 4 (amended) - [The apparatus of Claim 3] A paint ball loading and firing apparatus comprising in combination:

a source of compressed gas;

an elongate firing chamber having a barrel at a first end for release of a fired paint ball and a removable back plug at a second end opposite said first end;

a paint ball loading hole in said firing chamber, said loading hole located between said back plug and said barrel;

a selectively openable gas path between said source of compressed gas and said firing chamber;

wherein a door is located adjacent said loading hole, said door having an open position with said loading hole exposed to allow a paint ball to pass into said firing

chamber and a closed position with said door blocking passage of paint balls into said firing chamber;

wherein said door is controlled so that said door is restricted to said closed position when said selectively openable gas path is opened and compressed gas enters said firing chamber; and

wherein said door slides between said open position and said closed position within a door slot, said door slot restricting said door to sliding motion between said open position and said closed position.

Claim 11 (amended) - [The apparatus of Claim 10] A paint ball loading and firing apparatus comprising in combination:

a source of compressed gas;

an elongate firing chamber having a barrel at a first end for release of a fired paint ball and a removable back plug at a second end opposite said first end;

a paint ball loading hole in said firing chamber, said loading hole located between said back plug and said barrel;

a selectively openable gas path between said source of compressed gas and said firing chamber;

wherein a door is located adjacent said loading hole, said door having an open position with said loading hole exposed to allow a paint ball to pass into said firing chamber and a closed position with said door blocking passage of paint balls into said firing chamber;

wherein a trigger is provided which is manually toggleable by a user, said trigger configured to move a unity bracket controlling flow of compressed gas along said gas path and controlling movement of said door between said open position and said closed position; and

wherein said trigger manually adjusts flow of compressed air through a 3-way

valve with compressed air flow from said 3-way valve controlling a position of a ram including a piston traveling within a cylindrical blind bore, said piston of said ram coupled to said unity bracket for control of a position of said door and gas flow along said gas path.

Claim 14 (amended) - A paint ball marker, comprising in combination:

a grip;

a trigger;

a compressed gas source;

a firing chamber, said firing chamber being hollow between a back plug and a barrel through which a paint ball is fired;

a gas path extending between said compressed gas source and an entrance into said firing chamber, said gas path including at least one valve thereon, said valve at least partially controlled by said trigger; [and]

a loading hole in said firing chamber forward of said back plug, said loading hole passing laterally into said firing chamber, said loading hole at least as large as a paint ball to be fired out of said firing chamber[.]; and

a door adapted to move laterally relative to a center line of said firing chamber between a closed position adjacent said loading hole and an open position spaced from said loading hole.

Claim 15 (amended) - [The marker of Claim 14] A paint ball marker, comprising in combination:

a grip;

a trigger;

a compressed gas source;

a firing chamber, said firing chamber being hollow between a back plug and a barrel through which a paint ball is fired;

a gas path extending between said compressed gas source and an entrance into

said firing chamber, said gas path including at least one valve thereon, said valve at least partially controlled by said trigger;

a loading hole in said firing chamber forward of said back plug, said loading hole passing laterally into said firing chamber, said loading hole at least as large as a paint ball to be fired out of said firing chamber; and

wherein said valve in said gas path is an activator valve driven by a ram having a piston residing within a blind bore, said blind bore having air pathways on either side of said piston leading to a 3-way valve coupled to said trigger, with said trigger movable to move said ram piston and said activator valve.

Claim 20 (amended) - [The marker of Claim 19] A paint ball marker, comprising in combination:

a grip;

a trigger;

a compressed gas source;

a firing chamber, said firing chamber being hollow between a back plug and a barrel through which a paint ball is fired;

a gas path extending between said compressed gas source and an entrance into said firing chamber, said gas path including at least one valve thereon, said valve at least partially controlled by said trigger;

a loading hole in said firing chamber forward of said back plug, said loading hole passing laterally into said firing chamber, said loading hole at least as large as a paint ball to be fired out of said firing chamber;

wherein a door is located adjacent said loading hole, said door having an open position and a closed position;

wherein said marker includes a ram within a cylindrical blind bore having a piston slidably located therein, said piston controlled by compressed gas from said compressed

gas source selectively supplied to said blind bore by movement of said trigger, said piston coupled to a rod which is arranged to control movement of said door between said open position and said closed position; and

wherein said door includes a beveled surface, said door located within a door slot formed in said firing chamber adjacent said loading hole, said door slot shaped and sized to accommodate sliding of said door between said open position and said closed position, a loading slide having a beveled end which resides within a slide slot non-parallel with said door slot and adjacent said door, said beveled end having a slope which co-acts with said bevel led surface of said door when said beveled end of said loading slide abuts said bevel led surface of said door to cause said door to move from said closed position to said open position, said loading slide coupled to a unity bracket, said unity bracket also coupled to said rod of said ram, such that said loading slide is caused to move when said rod is caused to move by said trigger.